



# Aboriginal Heritage Management Plan

Mount Thorley Warkworth SSD-6464 & SSD-6465

## DOCUMENT CONTROL

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## Aboriginal Heritage Management Plan Mount Thorley Warkworth Operations (Warkworth Continuation SSD-6464 & Mount Thorley Operations SSD-6465)

**Table 1: Warkworth Continuation SSD-6464 Condition 43 – Aboriginal Heritage Management Plan requirements**

<b>Condition 43 - Aboriginal Heritage Management Plan</b>	<b>AHMP Provision/Schedule</b>
The Applicant shall prepare an Aboriginal Heritage Management Plan for the development to the satisfaction of the Secretary, and carry out the development in accordance with this plan. The plan must:	
(a) be prepared in consultation with OEH and Aboriginal stakeholders, and submitted to the Secretary for approval prior to carrying out any development under this consent;	Provision 2, Schedule 18
(b) include a program to:	
<ul style="list-style-type: none"> <li>salvage, investigate and/or manage Aboriginal sites and potential archaeological deposits within the disturbance area;</li> </ul>	Provisions 3-6, 10-24, 34 & 36 & Schedules 2-13
<ul style="list-style-type: none"> <li>assess and remove scarred trees within the disturbance area;</li> </ul>	Provisions 13 & 14 & Schedules 5 & 6
<ul style="list-style-type: none"> <li>protect and monitor Aboriginal sites outside the disturbance areas;</li> </ul>	Provisions 3-7, 22-25 & 36 & Schedules 2, 3 & 13
<ul style="list-style-type: none"> <li>manage the discovery of any new Aboriginal objects or skeletal remains during the development;</li> </ul>	Provisions 3, 4, 5, 10, 12-13, 15, 22, 24 & 37 & Schedules 2-5, 7-9 & 13-14
<ul style="list-style-type: none"> <li>facilitate access to archaeological sites on site for Aboriginal stakeholders; and</li> </ul>	Provision 34
<ul style="list-style-type: none"> <li>Aboriginal stakeholders are consulted and involved in the conservation and management of Aboriginal cultural heritage on the site; and</li> </ul>	Provisions 2, 7, 31, 35 & Schedules 3-14
(c) include a research program, that has been prepared by suitably qualified and experienced persons whose appointment has been approved by the Secretary, for locating and evaluating sand bodies of likely Pleistocene and early Holocene age that may contain evidence of Aboriginal habitation in the Upper Hunter Valley.	Provision 38 Schedule 17
<b>Condition 38 - Wollombi Brook Aboriginal Cultural Heritage Conservation Area</b>	
The Applicant shall prepare and implement a conservation management plan for the Wollombi Brook Aboriginal Cultural Heritage Conservation Area to the satisfaction of the Secretary.	Provision 7 Schedule 15

**Table 2: Mount Thorley Operations SSD-6465 Condition 28 – Aboriginal Heritage Management Plan requirements**

<b>Condition 28 - Aboriginal Heritage Management Plan</b>	<b>AHMP Provision/Schedule</b>
The Applicant shall prepare an Aboriginal Heritage Management Plan for the development to the satisfaction of the Secretary, and carry out the development in accordance with this plan. The plan must:	
(a) be prepared in consultation with OEH and Aboriginal stakeholders, and submitted to the Secretary for approval prior to carrying out any development under this consent;	Provision 2, Schedule 18
(b) include a detailed plan of management for the Loder Creek Aboriginal Cultural Heritage Conservation Area;	
(c) include a program to:	
<ul style="list-style-type: none"> <li>o salvage, investigate and/or manage Aboriginal sites and potential archaeological deposits within the disturbance area;</li> </ul>	Provisions 3-6, 10-24, 34 & 36 & Schedules 2-13
<ul style="list-style-type: none"> <li>o assess and remove scarred trees within the disturbance area;</li> </ul>	Provisions 13 & 14 & Schedules 5 & 6
<ul style="list-style-type: none"> <li>o protect and monitor Aboriginal sites outside the disturbance areas;</li> </ul>	Provisions 3-7, 22-25 & 36 & Schedules 2, 3 & 13
<ul style="list-style-type: none"> <li>o manage the discovery of any new Aboriginal objects or skeletal remains during the development;</li> </ul>	Provisions 3, 4, 5, 10, 12-13, 15, 22, 24 & 37 & Schedules 2-5, 7-9 & 13-14
<ul style="list-style-type: none"> <li>o facilitate access to archaeological sites on site for Aboriginal stakeholders; and</li> </ul>	Provision 34
<ul style="list-style-type: none"> <li>o Aboriginal stakeholders are consulted and involved in the conservation and management of Aboriginal cultural heritage on the site.</li> </ul>	Provisions 2, 7, 31, 35 & Schedules 3-14
<b>Condition 27 – Loder Creek Aboriginal Cultural Heritage Conservation Area</b>	
Within 3 years of the commencement of development under this consent, unless the Secretary agrees otherwise, the Applicant shall enter into a conservation agreement or agreements pursuant to section 69B of the <i>National Parks and Wildlife Act 1974</i> relating to the Loder Creek Aboriginal Cultural Heritage Conservation Area, recording the obligations assumed by the Applicant under the conditions of this consent in relation to the conservation area, and register the agreement/s pursuant to section 69F of the <i>National Parks and Wildlife Act 1974</i> .	Provision 7 Schedule 16

## Table of Abbreviations

ACHMD	Aboriginal Cultural Heritage Management Database
AHIMS	Aboriginal Heritage Information Management system
AHIP	Aboriginal Heritage Impact Permit
AHMP	Aboriginal Heritage Management Plan
ASIRF	Aboriginal Site Impact Recording Form
CHFO	Cultural Heritage Field Officer
CHMS	Cultural Heritage Management System
CHWG	Upper Hunter Valley Aboriginal Cultural Heritage Working Group
CHZS	Cultural Heritage Zoning Scheme
Cth	Commonwealth
DMO	Data Management Officer
DP&E	Department of Planning and Environment
DPIE	Department of Planning, Industry and Environment
GDA	Geocentric Datum of Australia
GDP	Ground Disturbance Permit
GIS	Geographic Information System
GM	General Manager
GPR	Ground Penetrating Radar
MTW	Mount Thorley Warkworth Operations
NSW	New South Wales
OEH	Office of Environment and Heritage
RAP	Registered Aboriginal Party
SSD	State Significant Development
ToR	Terms of Reference

## Recitals

- A. Yancoal Australia Pty Ltd holds Mining Tenements pursuant to Warkworth Continuation Operations and Mount Thorley Operations located south-west of Singleton, NSW.
- B. Warkworth Operations and Mount Thorley Operations are operated as an integrated mining operation and are referred to as Mount Thorley Warkworth Operations (MTW).
- C. Mining and associated development activities at MTW are approved and regulated under the Warkworth Continuation SSD-6464 and Mount Thorley Operations SSD-6465 development consents approved on 26 November 2015.
- D. MTW has developed this Aboriginal Heritage Management Plan pursuant to condition 14 (Schedule 2) and, condition 43 (Schedule 3) of SSD-6464, and condition 28 (Schedule 3) of SSD-6565.
- E. This Aboriginal Heritage Management Plan supersedes both the Warkworth Continuation Stage 1 Aboriginal Heritage Management Plan (January 2016) and the Mount Thorley Operations Heritage Management Plan (July 2014).
- F. The provisions of this Aboriginal Heritage Management Plan apply to all lands that are subject to the consent conditions of the Warkworth Continuation SSD-6464 and Mount Thorley Operations SSD-6465 as depicted in Schedule 1 of this Aboriginal Heritage Management Plan, as well as those additional lands owned by Yancoal surrounding the MTW operations.
- G. The provisions of this Aboriginal Heritage Management Plan apply to all Aboriginal Cultural Heritage objects and sites subject to conditions 40, 41, 42 and 43 of the Warkworth Continuation SSD-6464 and condition 26, 27 and 28 of the Mount Thorley Operations SSD-6465.
- H. Registered Aboriginal Parties through the auspices of the Upper Hunter Valley Aboriginal Cultural Heritage Working Group were consulted in the development of this Aboriginal Heritage Management Plan. The Registered Aboriginal Parties are those respondents to formal correspondence and public notices issued pertaining to the management of Aboriginal Cultural Heritage for the Warkworth Continuation SSD-6464 and Mount Thorley SSD-6465.
- I. Consultation undertaken with the Cultural Heritage Working Group for the development of this Aboriginal Heritage Management Plan has been held in accordance with the Office of Environment and Heritage *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*.
- J. Yancoal consulted with both the Department of Planning and Environment and Office of Environment and Heritage in the preparation of the original Aboriginal Heritage Management Plan.

- K. This Aboriginal Heritage Management Plan was originally approved by the Secretary, Department of Planning and Environment on **29 May 2017** and came into force on that date.



## Definitions

**Aboriginal Cultural Heritage** means all Aboriginal objects, sites, places and values of archaeological, traditional, spiritual, historical or contemporary Aboriginal significance. This definition is wide and is intended to cover the notion of cultural heritage as set in both state and federal legislation. In practical terms, this definition allows, for instance, recording of places which are archaeological sites (such as artefact scatters, stone arrangements, scarred trees and the like), any places which have traditional stories associated with them, places which are historically important (such as old camps) and places which are important today (such as good food-getting places or places used for recreational purposes). All cultural places and values identified are accorded equal importance in deliberations.

**Aboriginal Heritage Management Plan (or AHMP)** means this Aboriginal Heritage Management Plan document and its associated schedules, data, information and documentation.

**Aboriginal Heritage Management Plan (or AHMP) Area** means that portion of land consented for mining under SSD-6464 as described & depicted in the maps in Schedule 1 of this AHMP.

**Aboriginal Object/s** are defined under the *National Parks and Wildlife Act 1974* as 'any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains'.

**Aboriginal Stakeholders** means Registered Aboriginal Parties and/or other Aboriginal community representatives being those individuals, corporations, groups and other entities registered for consultation with MTW, principally through the MTW Cultural Heritage Working Group(CHWG).

**Cultural Heritage Field Officers (CHFO)** means those persons appointed by the Aboriginal Stakeholders to implement all those elements of the AHMP relating to the conservation and management of Aboriginal Cultural Heritage associated with the AHMP Area.

**Ground Disturbance/Disturbing Activity** means:

- (i) disturbance by machinery or other means of the topsoil or surface rock layer of the ground;
- (ii) the removal of native vegetation by disturbing root systems and exposing underlying soil; and
- (iii) otherwise disturbing the material or cultural integrity of an area or object of cultural heritage significance.

**Ground Disturbance Permit (GDP)** means the internal MTW permit that must be requested and approved before undertaking any work or activity that may disturb ground, such as clearing vegetation, removing top soil, excavating, that can potentially harm cultural heritage and/or environmental values.

**Site, cultural site or heritage site** means any area/s, object/s or value/s of Aboriginal archaeological, traditional, spiritual, historical or contemporary significance.

**MTW Cultural Heritage Working Group (CHWG).** The CHWG is the primary entity through which MTW communicates and consults regarding relevant matters pertaining to Aboriginal Cultural Heritage associated with MTW operations. The CHWG is comprised of Registered Aboriginal Parties who have expressed an interest in the management of Aboriginal Cultural Heritage in the MTW area and who participate in meetings, inspections and correspondence for the purposes of designing and implementing a management program for Aboriginal cultural heritage subject to this AHMP. Consultation through the CHWG is conducted in accordance with the Aboriginal community consultation requirements as mandated by Heritage NSW, The Department of Planning, Infrastructure and Environment (DPIE) or as otherwise required under statutory and/or regulatory processes.

**Verification** means the processes outlined in **Schedules 4, 5 and 7** of this AHMP.

## **Background**

### **Mount Thorley Warkworth Operations**

Mt Thorley Warkworth (MTW) is an integrated operation of two open cut mines, Warkworth Mining Limited (WML) and Mount Thorley Operations (MTO) which are located adjacent to each other and 15 km south west of Singleton in the Hunter Valley region of New South Wales. The operation supplies international and domestic markets with semi-soft coking coal and thermal coal.

Development Consent for the Warkworth Continuation and Mount Thorley Operations 2014 Projects (SSD-6464 and SSD-6465 respectively, together “the Approvals”) were granted on 26 November 2015.

### **Aboriginal Cultural Heritage Management at MTW**

MTW has comprehensive policies, standards and protocols in place to guide Aboriginal Cultural Heritage management across all of its operations. These policies are applied consistently and in close consultation with the Aboriginal community stakeholders who have interests in this region (which includes MTW) and with whom well developed and active formal relationships have been established.

The overarching objective of MTW’s Cultural Heritage Management System (CHMS) is to efficiently manage and mitigate the risks associated with development impacts on cultural heritage in order to provide mine sites and projects timely and authorised access to MTW lands for mining and associated development activities. The CHMS operates under the guiding principle of causing zero harm to Aboriginal and historic cultural heritage wherever possible. Where development requirements necessitate impacts on cultural heritage, MTW will ensure that all necessary and reasonable measures are implemented in order to mitigate those impacts in compliance with statutory requirements, cultural heritage agreements, MTW policies and standards, and in consultation with our host communities.

A responsive system for ongoing consultation with the Aboriginal community was developed through the Aboriginal Cultural Heritage Working Group (CHWG) which was established in September 2005. The CHWG oversees all aspects of Aboriginal Cultural Heritage management associated with MTW’s operations, projects and lands. The CHWG is acknowledged by both the Department of Planning, Industry and Environment (DPIE) and Heritage NSW as an appropriate Aboriginal community consultative forum.

The MTW area was the subject of a number of Aboriginal archaeological and heritage investigations and salvage programs undertaken between the mid-1980s and the early 2000s. More recently all of the lands within the MTW mining lease that are situated outside of the SSD-6464 and SSD-6465 development consent boundaries have been the subject of systematic and comprehensive Aboriginal cultural heritage investigations and assessments undertaken between 2009 and 2014. A systematic and comprehensive Aboriginal cultural heritage assessment was also undertaken in 2013 within the MTW SSD-6464 development consent boundary area to inform an Aboriginal Cultural Heritage Assessment Report for an Aboriginal Heritage Impact Permit (AHIP) application (#C000201). More recently a comprehensive Aboriginal cultural heritage impact assessment was undertaken to inform the

## Warkworth Continuation and Mount Thorley Operations 2014 Environmental Impact Statements.

These assessments have been undertaken in consultation with Registered Aboriginal Parties and with their active participation in fieldwork assessments, management and engagement activities. The results of the assessments, and consultation conducted over time with the CHWG, DPIE, and the then Office of Environment and Heritage have directly informed the preparation of this Aboriginal Heritage Management Plan (AHMP).

It is recognised by both MTW and the CHWG that this AHMP is a living document which may be revised and amended from time to time with the endorsement of MTW, the CHWG and Heritage NSW, and subject to such revisions and amendments being approved by DPIE.

## **Provisions of the Aboriginal Heritage Management Plan**

### **1. Purpose of the AHMP**

This AHMP sets out the principles, processes and measures through which Aboriginal cultural heritage will be managed at MTW with respect to all lands that are subject to the consent conditions of the Warkworth Continuation SSD-6464 and Mount Thorley Operations SSD-6465, as well as those additional lands owned by MTW surrounding the operations, as depicted in Schedule 1 of this AHMP. This is an integrated AHMP that has been developed to comply with condition 43 (Schedule 3) of the Warkworth Continuation SSD-6464 and condition 28 (Schedule 3) of the Mount Thorley Operations SSD-6565.

The internal procedures referenced in this AHMP (e.g Ground Disturbance Procedures, Scarred Tree Management Procedures) have not been reviewed or endorsed by DPIE. MTW takes responsibility for ensuring these procedures are in accordance with this AHMP and generally in accordance with the Project Approval.

This AHMP supersedes both the Warkworth Continuation Stage 1 Aboriginal Heritage Management Plan (January 2016) and the Mount Thorley Operations Heritage Management Plan (July 2014).

### **2. Consultation**

The CHWG is the primary forum through which MTW communicates and consults with regard to all matters pertaining to Aboriginal cultural heritage associated with the MTW operations.

Consultation through the CHWG is conducted in accordance with the Aboriginal community consultation requirements as mandated from time to time by Heritage NSW, and DPIE and/or as otherwise required under the relevant and current statutory and/or regulatory processes. Outcomes from the consultation process conducted through the auspices of the CHWG inform management decision-making associated with the development, implementation and revision of this AHMP.

Notwithstanding the use of the CHWG as the primary consultation forum, MTW provides copies of all documentation requiring community consultation to all Registered Aboriginal Parties (RAPs). MTW solicits commentary on such documentation and will respond to any issues raised in such commentary outside of the CHWG where necessary.

Consultation with RAPs to inform the development of this AHMP was undertaken at CHWG meetings (and via subsequent correspondence) held on 18 December 2015, 21 January, 17 March, 28 April, 9 July, 11 August, 20 October and 15 December 2016. Consultation drafts of the original version of this AHMP were reviewed by the CHWG RAPs at meetings held on 20 October and 15 December 2016. Documentary evidence of this consultation is provided in Schedule 18.

A copy of the original AHMP was also provided to OEH on 16 November 2016 for review and comment prior to submission to DP&E (see schedule 18).

The results of the Aboriginal Cultural Heritage assessments and consultations with the CHWG, DP&E, and OEH have directly informed the preparation of this AHMP and any recommendations from these, once reviewed and settled between MTW and the CHWG, have been incorporated into this AHMP.

### **3. Cultural Heritage Management Database**

The Aboriginal Cultural Heritage Management Database (ACHMD - see **Schedule 2**) documents the identification number, location, attributes and specific management requirements for each cultural heritage site (e.g. object, site or area) that is subject to this AHMP. The ACHMD incorporates all Aboriginal cultural heritage sites located within the AHMP Area (as described in **Schedule 1** of this AHMP) that are either registered in the Heritage NSW Aboriginal Heritage Information Management System (AHIMS) sites database or have been recorded during assessments, inspections or as chance finds that are pending registration in the AHIMS database.

The AHMP ACHMD is a core element of the MTW Aboriginal Cultural Heritage Geographic Information System (GIS) and Cultural Heritage Zoning Scheme (CHZS). The ACHMD is a 'live' database that records the management status of each site as management actions are implemented (such as salvage mitigation) and the database updated over time including inclusion of new sites. The ACHMD includes the following information to inform the management of each site:

- a. The Unique Identifier number and AHIMS register number (where applicable);
- b. Site Type (e.g. isolated find/s, artefact scatter, scarred tree etc);
- c. Site Description and Values (e.g. number/density and attributes);
- d. Site Extent (e.g. 10m diameter);
- e. Date recorded and person recording;
- f. Coordinates (GDA94 Zone 56);
- g. Management Option A (management measures if a site is NOT disturbed by development); and
- h. Management Option B (management measures if site is to be disturbed by development)

### **4. Aboriginal Cultural Heritage GIS and Zoning Scheme**

The MTW Aboriginal CHZS controls mine development-related land use activities within the AHMP Area, and other lands associated with the MTW area. The CHZS is incorporated within the MTW Aboriginal Cultural Heritage GIS. The GIS records Aboriginal cultural heritage site locations, extents and other management information as well as the zoning scheme. The CHZS is revised from time to time in line with the implementation of the provisions of the AHMP. Details of the CHZS management status zone classifications are provided in **Schedule 3** of this AHMP.

### **5. Ground Disturbance Permits (GDP)**

No ground disturbing activity may take place within the AHMP Area without the issue of a GDP by duly authorised MTW personnel for the particular ground disturbing activity within areas where a GDP approval is required. The GDP process is an internal MTW mechanism

that is additional to, but does not obviate, the need to comply with the provisions of this AHMP or other relevant development consent approvals.

No GDP may be approved unless the area that is subject to the proposed ground disturbing activity has been assessed against the CHZS and all relevant management measures have been implemented as specified in the ACHMD (**Schedule 2**) of this AHMP.

All applications for a GDP must specify the boundary extent of the area that is to be subject to the ground disturbing activity, the nature of the activities that are to be undertaken in that area, and the proposed date on which the activities are to commence.

## **6. Management of Aboriginal Objects**

The management of collected Aboriginal objects (e.g. artefacts) has been considered for both the short and the long term. Previous removal (salvage) of Aboriginal objects from within the AHMP Area has occurred under the authority of an AHIP consent and removed objects remain the property of the State of NSW. An Aboriginal Site Impact Recording Form will be completed for any Aboriginal objects/sites located within the AHMP Area that are salvaged under the provisions of this AHMP.

### **Short Term Management**

Aboriginal objects removed from the AHMP Area under the provisions of this AHMP, or those previously removed in accordance with a relevant AHIP consent and Care Agreement, or as otherwise authorised under the provisions of this AHMP, will be appropriately tagged (noting site AHIMS number, date of mitigation, AHIP consent number, storage identification number, etc.) and securely stored at the MTW Putty Road Cultural Heritage Storage Facility (under the authority of Care Agreement # C0003708). In accordance with Care Agreement C0003708 MTW has relocated to the MTW Putty Road Cultural Heritage Storage.

### **Long Term**

In the absence of an alternative long-term storage option, such as a NSW government sanctioned regional storage facility for Aboriginal objects (e.g. a Hunter Valley keeping place), all Aboriginal objects removed from the AHMP Area under the provisions of this AHMP will be appropriately tagged (noting site AHIMS number, date of mitigation, AHIP consent number, storage identification number, etc.) and securely stored at the MTW Putty Road Cultural Heritage Storage Facility.

Alternatively, Aboriginal objects removed from the AHMP Area may also be relocated to either the Wollombi Brook or Loder Creek Aboriginal Cultural Heritage Conservation Areas where such relocation is authorised under the Plan of Management for these conservation areas.

In the event that a NSW government sanctioned regional storage facility for Aboriginal objects is established (e.g. a Hunter Valley keeping place) and the RAPs request the relocation of collected Aboriginal objects from the AHMP Area to this facility, and the state government approves such a request, then MTW will facilitate this request.

Notwithstanding the above, any Aboriginal objects (to the extent that they are stone artefacts) that are collected from the AHMP Area will be managed in accordance with the *DPIE Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* and as otherwise required in compliance with a relevant Care and Control Permit granted by DPIE.

#### **7. Wollombi Brook and Loder Creek Aboriginal Cultural Heritage Conservation Areas**

Plans of Management for the Wollombi Brook (condition 38 of the Warkworth Continuation SSD-6464) and Loder Creek (condition 28 (b) of the Mount Thorley Operations SSD-6465) Aboriginal Cultural Heritage Conservation Areas have been developed and are attached as **Schedules 15 and 16** of this AHMP.

#### **8. Workplace Health and Safety**

MTW is committed to the principle that all workplace injuries are preventable and accepts its responsibility to provide a safe workplace, fit-for-purpose equipment and safe systems of work. This can only be achieved if all understand and accept obligations to comply with relevant legislation and any relevant MTW operational policies, procedures or plans.

All MTW employees and contractors undertaking cultural heritage management activities within the AHMP Area will be required to have participated in any inductions required by MTW prior to entry to the mine leases to ensure they have an understanding of relevant legislation and any relevant MTW operational policies, procedures or plans.

Employees and contractors conducting cultural heritage management activities will be required to wear all relevant personal protective equipment as prescribed under the MTW Health and Safety procedures.

With respect to community access and management activities conducted within the AHMP Area, specific culturally appropriate workplace health and safety requirements will be established to accommodate Cultural Requirements as set out in Section 33 of this AHMP.

#### **9. Cultural Heritage Management Inductions**

The MTW induction process includes appropriate Aboriginal Cultural Heritage management content. The induction process applies to all personnel and contractors working at MTW.

As a minimum requirement, MTW will ensure that the following elements are incorporated in the current and any future cultural heritage management induction module for the AHMP Area:

- a. an overview of the cultural heritage management program implemented at the MTW area;
- b. a general description of cultural heritage values - both the tangible (e.g. material culture such as artefacts) and the intangible (e.g. spiritual);
- c. an overview of the AHMP and its provisions;
- d. an overview of the CHZS and the Limit of Disturbance Boundary provisions;
- e. an overview of the standard operating procedures associated with Significant Areas, Restricted Access Areas and other CHZS requirements;



- f. an overview of the GDP system and the specific requirements associated with cultural heritage management;
- g. the legal provisions governing the management of cultural heritage; and,
- h. the responsibility and duty of care that each individual has to comply with the cultural heritage management process established for the MTW area, and with all relevant provisions of pertinent legislation.

Detailed records are maintained of all personnel who have completed the MTW induction process and the date on which it was provided. MTW will ensure these inductions remain current (which may include refresher courses from time to time where this is deemed necessary).

#### **10. Discovery of Human Skeletal Remains**

Where identified or possible human skeletal remains are discovered within the AHMP Area the NSW Government sanctioned process for the management of skeletal remains will be implemented. Details of the process for management of the discovery and reporting of skeletal remains are appended in **Schedule 14** of this AHMP.

#### **11. Areas Unassessed for Cultural Heritage**

Any areas within the AHMP Area that may be unassessed for the presence of cultural heritage and are to be the subject of development activity will be treated in the same manner as all other parts of the AHMP Area where assessments have been carried out in respect to survey methodologies and development/implementation of management processes, and are subject to all relevant provisions of this AHMP.

#### **12. ‘Spiritual’ Places Verification and Management**

Any places so identified will be subject to the verification and management process outlined in **Schedule 4** of this AHMP.

#### **13. Scarred Trees Verification and Management**

Any places so identified will be subject to the verification and management process outlined in **Schedule 5** of this AHMP.

#### **14. Scarred Trees Removal and Relocation**

Any verified scarred trees that require salvage under the provisions of this AHMP shall be managed in accordance with the management process detailed in **Schedule 6** of this AHMP.

#### **15. Hearths Verification and Management**

Any places so identified will be subject to the verification and management process outlined in **Schedule 7** of this AHMP.

**16. Sub-Surface Investigations (including Potential Archaeological Deposits)**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 8** of this AHMP.

**17. Material Resource Areas (e.g. quarries for stone or ochre)**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 9** of this AHMP.

**18. Controlled Collection of Artefact Scatters**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 10** of this AHMP.

**19. Salvage Collection of Isolated Artefacts**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 11** of this AHMP.

**20. Site M Grinding Grooves Management**

The Grinding Groove Sites M West and M East (AHIMS# 37-6-0163) were successfully removed and relocated to the Putty Road cultural heritage storage facility during a salvage program conducted between 26 February to 1 March 2018.

The Site M Grinding Grooves (AHIMS# 37-6-0163) were the subject of numerous RAP and community inspections and assessments over the past decade. The attributes and extent of Site M, as well as the geotechnical constraints to their removal and relocation, were well understood.

A detailed geo-technical analysis of the removal and relocation of Site M was undertaken by Luc Daigle, Senior Geological Engineer, SCT Consulting and recommendations for salvage methodology developed (Report to Rio Tinto Coal Australia - Warkworth Grinding Grooves Relocation Project Geological and Geotechnical Assessment of Sites PN10, M West and M East, June 2010). The salvage methodology recommended in the report formed the basis for the scope of works that was agreed with the CHWG for the salvage activities.

**21. Activity Area Monitoring**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 12** of this AHMP.

**22. Fencing and Barricading Cultural Heritage Sites, Places and Areas**

Any places identified as requiring this form of management will be subject to the management process outlined in **Schedule 13** of this AHMP.

**23. Signage for Cultural Heritage Sites, Places and Areas**

All cultural heritage sites, places and areas located within the AHMP Area that are subject to fencing and barricading requirements, as per Section 21 and **Schedule 13** of this AHMP, will be identified with at least one sign which denotes that the site, place or area is either a Significant Area or Restricted Access Area or Archaeological/Heritage Site unless otherwise specified in **Schedule 2** of this AHMP for any particular site, place or area. Additional signs will be installed along the site boundary for larger sites so that the site boundary is clearly denoted from all directions of access. Signs will make it explicit that entry to these areas is not permitted without internal authorisation and appropriate regulatory consent.

#### **24. Ground Disturbance Management Buffers**

Unless otherwise specified in **Schedule 2** of this AHMP, a ground disturbance management buffer will apply around each defined site extent. No disturbance is to occur within the buffer area without authorisation under this AHMP and an approved MTW GDP.

The management buffer area is defined as the distance between the greatest extent of the site in any particular direction and the external buffer boundary. Buffered areas may be delineated with temporary barricading or with hard fencing where specified in either **Schedule 2** or **Schedule 13** (Fencing and Barricading Cultural Heritage Sites, Places and Areas) of this AHMP, or where required as a condition of a GDP. Where hard fencing or barricading has been installed around a site in conformance with **Schedule 13**, then the fence/barricade alignment will constitute the outer boundary of the ground disturbance management buffer.

Where specific site conditions or project requirements do not allow space sufficient for the standard prescribed management buffer, for example where an existing track, fence, or other physical constraint intersects with the buffer area, then the buffer distance will be that which is the greatest practical distance available.

The standard management buffer radius dimensions for each generic site type are as follows:

- a. Isolated Artefact/s – 5m from centroid or around extent boundary;
- b. Stone Artefact Scatters – 5m around extent boundary;
- c. Sub-Surface Investigation Areas – 5m around extent boundary;
- d. Hearths – 5m from centroid or around extent boundary;
- e. Material Resource Areas – 5m around extent boundary;
- f. Scarred Tree/s – 20m from centroid or around extent boundary;
- g. Other Significant Areas - 20m around extent boundary;
- h. Spiritual Places – 50m around extent boundary;
- i. Burials – 50m from centroid or around extent boundary; or
- j. As otherwise specified in the ACHMD of **Schedule 2** of this AHMP.

#### **25. AHMP Compliance Inspections**

MTW will facilitate and resource a process whereby representatives of the CHWG may participate in AHMP compliance inspections at least annually for the life of mining operations within the AHMP Area. MTW, at its discretion, may initiate AHMP compliance inspections at other times as it determines are necessary including incident investigations pertaining to alleged procedural breaches of the AHMP. Where MTW initiates such compliance inspections it will also invite representatives of the CHWG to participate.

The purpose of the AHMP compliance inspections is to afford the CHWG and MTW the opportunity to:

- a. visit the MTW mine to inspect areas and sites to assess compliance with the provisions of this AHMP;
- b. inspect and monitor the condition and management of various sites; and
- c. review the effectiveness and performance of the AHMP provisions in the management of cultural heritage at the mine.

Reports on AHMP compliance inspections, and other inspections as may be undertaken consistent with the above provisions, will be drafted by MTW with the assistance of the representatives of the CHWG who assisted in the inspection. These reports will be provided to the CHWG. An annual report on the outcomes of compliance inspections will be incorporated into the Mount Thorley and Warkworth Annual Reviews which are provided to DPIE and Heritage NSW, and which will also summarise what Aboriginal cultural heritage activities have been undertaken during the reporting period. Reports of each compliance inspection will also be made available to RAPs upon request.

AHMP compliance inspections will involve the following elements:

- a. MTW and the CHWG will settle a Terms of Reference (ToR) for each AHMP compliance inspection specifying the area to be inspected and methodology to be adopted;
- b. the CHWG may nominate up to three (3) representatives to assist in the conduct of AHMP compliance inspections;
- c. MTW may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to participate in the AHMP compliance inspections;
- d. an AHMP compliance inspection report pro-forma will be completed for the nominated inspection areas and signed by the CHWG representatives and Technical Advisor (if present);
- e. the AHMP compliance inspection report pro-forma will note the outcomes of the inspections including evidence of compliance and non-compliance with AHMP provisions, recommendations on modifications and improvements to management provisions, recommendations on corrective actions, and other relevant comments associated with the AHMP provisions;
- f. MTW and the CHWG will review any recommendations arising from the compliance inspection and may agree to adopt any or all recommendations, or make such other measures they deem appropriate to address any issues raised in the compliance inspection; and
- g. where MTW and the CHWG agree to any recommendations or other measures, then MTW will amend this AHMP in consultation with Heritage NSW, and seek DPIE approval on the amendments to the AHMP.

## **26. Confidentiality**

The following information is confidential information:

- a. information (including but not limited to any reports, correspondence, photographs, data or technical specifications provided verbally, in writing or digitally) provided by,

or compiled under a relevant ToR for the purposes of developing this AHMP, or as required by this AHMP; and

- b. information concerning:
  - (i) Yancoal or any Related Body Corporate,
  - (ii) MTW,
  - (iii) Yancoal's operations, or
  - (iv) any Aboriginal Cultural Heritage, Significant Objects or Significant Places.

Yancoal will not disclose any of the confidential information referred to in this section except:

- a. to officers, employees, members, directors, servants, agents, contractors and sub-contractors of Yancoal whose duties require such disclosure;
- b. to members of the Aboriginal community, through the auspices of the CHWG, where information regarding Aboriginal cultural heritage sites has been requested;
- c. to Yancoal's accountants, technical advisors, legal advisors, auditors or other professional advisers, or to Yancoal's financiers or to a recognised stock exchange on which a party are listed;
- d. to the extent necessary to comply with any Applicable Laws, or where disclosure is required by any Applicable Laws;
- e. where disclosure is necessary in performing obligations or enforcing rights under this AHMP;
- f. to the extent that such information is already part of the public domain otherwise than by breach of this section;
- g. as expressly permitted under this AHMP;
- h. where Yancoal is required to meet internal governance or decision making processes in relation to developing, authorising, implementing or operating this AHMP;
- i. where disclosure of the information is required to comply with any requirement of any Government Agency or other regulatory body (including the Australian Stock Exchange) and Yancoal uses its reasonable endeavours to minimise such disclosure;
- j. for any due diligence study by a prospective assignee; or
- k. in defending any legal action where Aboriginal cultural heritage is relevant.

Yancoal shall take all steps reasonably necessary to ensure that the confidential information referred to in this section is known only to such persons as may reasonably require knowledge thereof in the course of their duties or functions and, to the extent permitted by law, require any person to whom it intends to disclose such information (who is not otherwise under a statutory, professional or contractual duty to keep such information or data confidential) to give an undertaking to keep such information confidential.

## **27. Reconciliation of Aboriginal Cultural Heritage Data**

For the area covered by this AHMP, there were several data sets that contained various information collected over several decades with respect to Aboriginal cultural heritage. One of the purposes of the comprehensive and systematic Aboriginal cultural heritage studies commissioned by MTW in recent years under the provisions of relevant ToR, has been to compile a single accurate dataset which comprehensively describes the Aboriginal cultural heritage values of the AHMP Area.

MTW has undertaken a process to reconcile inconsistencies between its ACHMD and that maintained for the area through the AHIMS database. With Heritage NSW's concurrence, the AHIMS database will be updated using MTW's database to provide the most accurate information on all sites within the AHMP Area.

For the purposes of the management of Aboriginal cultural heritage within the AHMP Area, the definitive dataset will be that as provided within **Schedule 2** of this AHMP which includes AHIMS data. **Schedule 2** will be subject to revision based on:

- the results of verification processes contemplated under this AHMP;
- further investigation of areas that may not have been the subject of comprehensive field investigation at the time of the development of this AHMP;
- where any Aboriginal cultural heritage is identified in the course of monitoring or management activities, or as chance finds;
- and subsequent to the implementation of the management measures as specified within **Schedule 2** of this AHMP.

## **28. Procedural Breaches, Incident Reporting and Urgent Relief**

In accordance with Schedule 5, condition 3 (g) and condition 7 of both SSD- 6464 and SSD-6465 any alleged procedural breach of this AHMP will be investigated in accordance with the MTW site incident investigation procedures and incidents reported immediately to the Secretary and any other relevant agencies. A detailed report on any incidents will be provided to the Secretary within the timeframe specified in the conditions of the SSD-6464 and SSD-6465 approvals, and such further reports as may be requested by the Secretary.

MTW will engage RAPs to inspect the location and immediate surrounds of the incident area to assess for any impacts on Aboriginal cultural heritage. Any incidents that are determined to be a breach of the conditions of this AHMP, including any unauthorised impacts on Aboriginal cultural heritage, will be reported to the CHWG as soon as practicable but, nominally, within two business days.

MTW accepts that nothing in this AHMP prevents any individual or corporate entity from seeking urgent relief from a Government Agency, a Court or Tribunal for any other order, relief or remedy (including injunctive or declaratory relief) against each other and any other person that may be available to them at law or in equity.

With respect to Aboriginal cultural heritage, an application for an order under either section 9 or 10 of the *Aboriginal and Torres Strait Islander Heritage Protection Act 1984* (Cth) will not necessarily preclude MTW from continuing the conduct of its lawful operations.

## **29. Variations to this AHMP and Schedules**

As the MTW SSD-6464 and SSD-6465 approvals are valid to November 2036 there may be circumstances in the future (such as changes in legislation) where variations or revisions to this AHMP and schedules are required. MTW will review this AHMP as per the requirements of both SSD-6464 and SSD-6465.

Where MTW determines through such reviews that a variation or revision of this AHMP or schedules is required, MTW will, in consultation with the RAPs, engage with DPIE, Heritage NSW and any other relevant agencies that have authority to approve variations or revisions to the AHMP or schedules. MTW will submit in writing any such proposed variations or revisions (and updates to schedules) to DPIE and any other relevant agencies for information and/or consideration and/or written approval. Variations to Schedule 2 will not include removal of sites from the schedule nor downgrading of significance classification or management measures for sites listed in Schedule 2.

### **30. Statutory Consents**

The MTW SSD-6464 and SSD-6465 development approvals provide an exemption from any further statutory authorities for the management of Aboriginal cultural heritage for the term of these development consents. This includes the requirement for obtaining Aboriginal Heritage Impact Permits (AHIP) under s90 of the *National Parks and Wildlife Act 1974*. This AHMP, as approved by the Secretary, provides the statutory authority necessary to undertake the preparation and implementation of all assessment, management, mitigation and salvage measures for Aboriginal cultural heritage located on lands that are subject to this AHMP.

An AHIMS site card form will be completed and submitted for any new Aboriginal objects/sites identified within the AHMP Area (see section 36).

An ASIRF will be completed and submitted to OEH for any existing or new Aboriginal objects/sites located within the AHMP Area that are salvaged or otherwise disturbed or destroyed under the authority of this AHMP.

### **31. Implementation of Management Measures**

The implementation of cultural heritage management measures at MTW will be undertaken and in accordance with the provisions of this AHMP. Where required a ToR (or other scope of works) will be developed in consultation with the CHWG and implemented as may be appropriate.

### **32. Terms of Reference (ToR) – Scope of Works**

Cultural heritage assessments, mitigation and other management activities undertaken within the AHMP Area are generally formalised through a ToR or other scope of works. A ToR is a scope of works document that provides details of a proposed activity and its potential impacts, the scope and scale of the cultural heritage activities and methodology (e.g. survey, salvage mitigation etc), description of areas for investigation, management requirements, outcomes of investigations (reporting), personnel required, selection of Technical Advisors, work dates, hours and fees, site induction requirements, occupational health and safety issues, administrative and logistical arrangements, communications, data management and sensitive information management protocols, budgets and contact details. ToRs are developed in collaboration with Aboriginal stakeholders through the auspices of the CHWG as may be appropriate.

Cultural Heritage Field Officers (CHFOs), as representatives of the CHWG as RAPs, are engaged to assist MTW under the auspices of the ToR to conduct the assessment or other management activities. Technical Advisors, such as archaeologists, may be engaged by MTW on behalf of the CHWG to assist with the development of assessment and management methodologies, and to provide technical advice to the CHWG. Technical Advisors may participate at the invitation of the CHWG and report directly to the CHWG as their independent advisor. The CHFOs and Technical Advisors work within the parameters established in this AHMP and as detailed in a ToR.

Assessment and management methodologies are designed to be systematic and comprehensive, and rigorous planning and digital data management procedures are applied to ensure CHFOs are afforded the opportunity to comprehensively assess areas for Aboriginal cultural heritage and implement management measures.



### **33. Administrative Arrangements for Aboriginal Cultural Heritage**

#### **33.1 - Administrative Coordinators**

MTW may engage Upper Hunter Valley Aboriginal community or private incorporated entities or other commercial entities as Administrative Coordinators for the provision of administrative coordination and project support services associated with MTW's Aboriginal Cultural Heritage management program at MTW.

Administrative coordination and project support services may include sub-contracting the employment of CHFOs to be engaged in cultural heritage field work, payment of wages, allowances, taxes, superannuation and insurances, organising community meetings and assisting with community consultation associated with MTW's Aboriginal cultural heritage programs.

Administrative Coordinators will be selected and be engaged in consultation with the CHWG. However, as a contingency, where an Upper Hunter Valley Aboriginal community or private incorporated entity is not available to provide these services, then MTW may engage an agent to provide these services on its behalf.

#### **33.2 - Cultural Heritage Field Officers (CHFOs)**

CHFOs will be selected and engaged in consultation with the CHWG. CHFOs will be responsible for conducting the assessment of cultural heritage during field surveys (i.e. identification of Aboriginal cultural heritage objects, sites and places) and implementing management measures such as salvage mitigation.

#### **33.3 - Technical Advisors**

A Technical Advisor may be engaged by MTW to assist the CHFOs during their investigations, management and assessment activities and provide technical advice on the type, form, extent, archaeological significance and other aspects of Aboriginal cultural heritage management as may reasonably be requested by the CHWG Aboriginal stakeholders. The Technical Advisor will ensure that their assessment and reporting activities are conducted in conformance with the *OEH Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* and any additional requirements specified in a ToR and/or this AHMP. The Technical Advisor will also record details of the Aboriginal cultural heritage identified by the CHFOs in collaboration with the MTW Data Management Officer. The Technical Advisor will provide a report on the outcomes of these investigations as specified in a ToR or other reporting brief.

The Technical Advisor may also be engaged to assist with management activities such as salvage collections, sub-surface investigation, excavations, site verification etc. in consultation with the CHWG, and OEHL where required.

MTW also reserves the right to select and engage Technical Advisors that MTW deem suitably qualified and experienced to undertake the duties of Technical Advisor, either engaged on the behalf of the CHWG or specifically for MTW where required. Technical Advisors will be endorsed by the CHWG prior to engagement.

### **33.4 - Data Management Officers (DMO)**

The DMO may be an MTW employee or a contractor engaged by MTW and is responsible for directing the survey transects/mitigation activities as per the agreed methodology and electronically recording all Aboriginal cultural heritage objects, sites and places identified by the CHFOs and/or Technical Advisor. The DMO will enter this information into the MTW Aboriginal Cultural Heritage GIS. The DMO will generate all maps and survey and site recording, mitigation and management data for MTW and the CHWG. The DMO will also provide new sites data input and revisions for existing sites for inclusion in or revision of the AHIMS sites database in concurrence with OEH.

## **34. Cultural Requirements**

RAPs may, from time to time, either individually or through the auspices of the CHWG, as a schedule to this AHMP, or through a ToR, advise MTW of any particular cultural protocols or requirements relating to issues such as sorry business, men's and women's business and other cultural protocols and arrangements. The implementation of such cultural protocols or requirements will be by agreement with MTW, with MTW's agreement not unreasonably withheld.

## **35. Aboriginal Community Access to the Project Area**

The AHMP Area generally constitutes an active mining area and as such is subject to coal mining, occupational health and safety and other legislation and regulation, and MTW procedures regarding access and health and safety requirements. Reasonable access to the AHMP Area will be made available to Aboriginal stakeholders conditional upon satisfying relevant regulatory and MTW access protocols, and the following additional requirements:

- completion of any necessary visitor and area-specific inductions or other formal requirements as may be introduced from time to time;
- that visitation to the AHMP Area will be escorted by MTW personnel and undertaken in mine compliant vehicles also provided by MTW ; and
- that visitation will be conducted on an unpaid basis unless otherwise determined by MTW.

Unless agreed by MTW, requests for permission to access the AHMP Area must be made in writing at least 10 business days in advance of the proposed date of the visit. This request must advise:

- the purpose of the visit;
- the areas to be visited;
- the names of all persons proposed to take part in the visit;
- any intention to record the visit using any audio visual equipment (including video footage, still photographs or audio recordings) and written permission will be required to do so with this permission granted at the absolute discretion of MTW.

MTW will provide a formal response to the application which may include the reasons for that decision and any conditions that will apply to the visit. MTW's response is to be provided at least 5 business days in advance of the proposed date of the visit.

Any decision made by MTW with respect to an application made for a visit to the AHMP Area will not be subject to review. MTW will notify the CHWG of all applications for visitation to the AHMP Area and their decision in that matter.

### **36. Minimisation of Blasting Impacts**

MTW will determine the nature and risks of potential impacts of blasting activities upon Aboriginal cultural heritage situated within the vicinity of the AHMP Area as an element of the MTW blast management plan.

Consistent with the results of the risk assessment process used to inform the development of, and, from time to time, revise and update the MTW blast management plan, MTW will implement appropriate management measures consistent with the AHMP for the relevant type of Aboriginal cultural heritage object or place, which may include the salvage collection of Aboriginal objects deemed at risk where authorised to do so under the development consents.

Additionally, MTW will implement a program of monitoring of blast affects at selected nearby locations as listed in Schedule 3, condition 14(b) of the Warkworth Continuation SSD-6464 to determine any impacts resulting from blasting activities. Should this monitoring show the initial risk modelling requires amendment, such amendment will be made and management measures, consistent with the relevant classification of cultural heritage as described in this AHMP and ACHMD, implemented as required.

### **37. Discovery of New Finds**

Any newly identified Aboriginal cultural heritage objects, sites or places located within the AHMP Area will be protected with an initial 20m buffer (where physically possible to do so) around the site until MTW and the RAPs through the CHWG, have agreed on the site type, extent and the management measure/s most appropriate to manage the site as detailed within the AHMP.

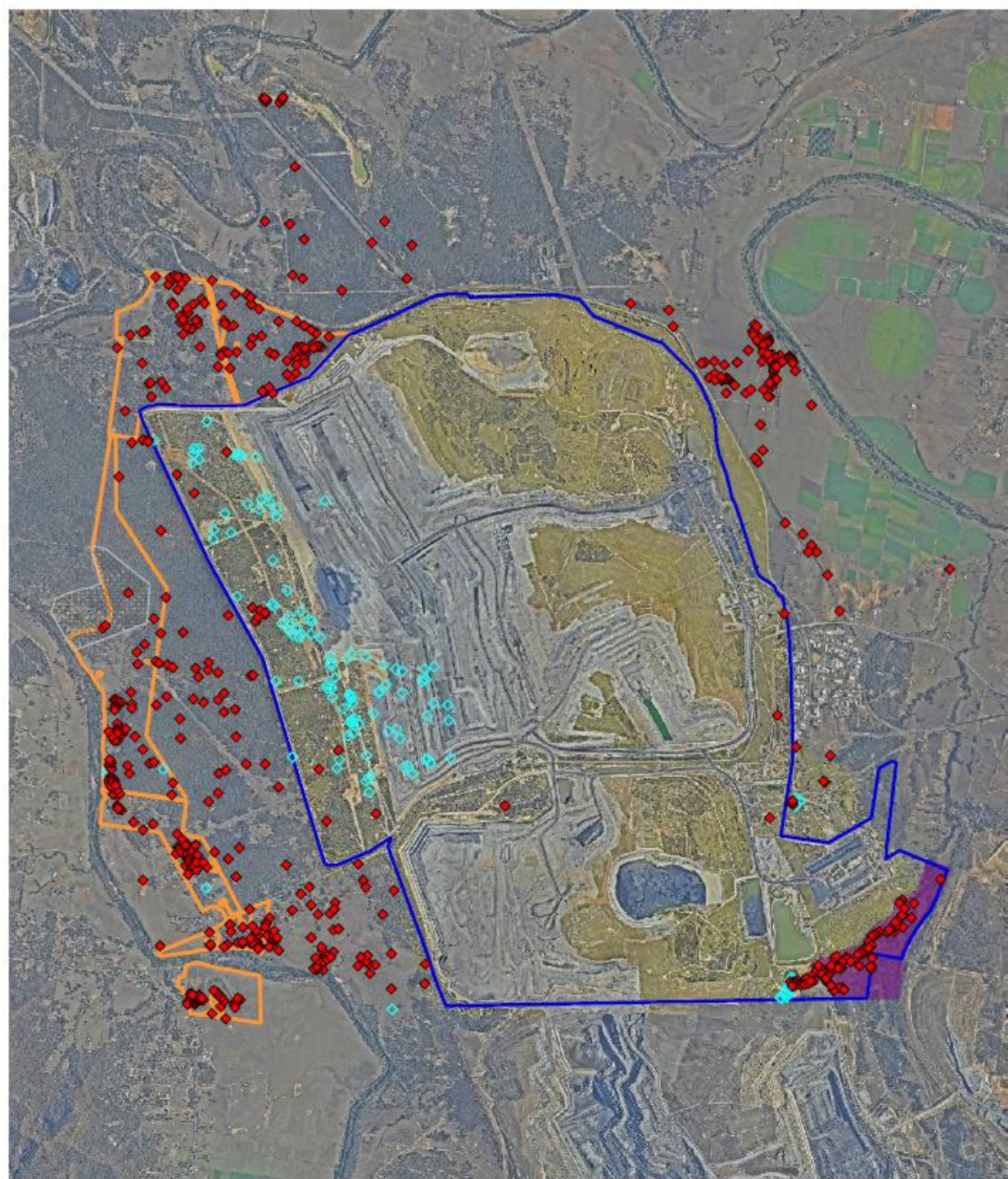
Once the site type, extent and the management measure/s have been determined, all newly identified Aboriginal cultural heritage sites will be physically protected by the implementation of the procedures specified in **Schedule 13** (Fencing and Barricading Cultural Heritage Sites, Places and Areas) of this AHMP or as otherwise consistent with other provisions of this AHMP.

An AHIMS site card is to be completed and submitted for each newly identified Aboriginal cultural heritage site or aggregation of sites. The final attributes and extent of any new sites to be registered in the AHIMS database will be as determined by MTW.

### **38. Hunter Valley Sand Bodies Research Program**

In accordance with Schedule 2, condition 43 (c) of the Warkworth Continuation SSD-6464 a methodology for a research program for locating and evaluating sand bodies of likely Pleistocene and early Holocene age that may contain evidence of Aboriginal habitation in the Upper Hunter Valley will be developed. The MTW Sands Bodies Research Project methodology will be incorporated as **Schedule 17** of this AHMP.

Schedule 1 – Location Map of the MTW AHMP Area



## **Schedule 2 – MTW Cultural Heritage Management Measures Database**

The Aboriginal Cultural Heritage Management Database (ACHMD) is a 'live' sites register and management measures database. The ACHMD documents the identification number, location, attributes and specific management requirements for all Aboriginal cultural heritage sites (e.g. object, site or place) that are subject to this AHMP.

The ACHMD incorporates all Aboriginal cultural heritage sites located within the AHMP Area that are either currently registered in the AHIMS sites database or have been recorded during assessments, inspections or as chance finds that are pending registration in the AHIMS database.

New sites will be added to the database as they are identified during future assessments or inspections, or when chance finds are identified during the life of the operations approved under SSD-6464 and SSD-6465. The database includes the specific management measures to be implemented for each site and will be updated as management measures are implemented or revised (e.g. when sites are salvaged under the authority of this AHMP).

The management measure designating 'No Further Management Required' refers to the management status of sites that have been destroyed and/or salvaged under previous authorities (i.e. AHIP consent or AHMP) and for sites subsequently salvaged under the authority of this AHMP. Once the salvage activities have been completed, and an Aboriginal Site Impact Recording Form lodged, then Schedule 2 Management Measures will be updated to reflect that no further management of these salvaged sites is required.

A tabulated listing of extant ACHMD sites located within the AHMP Area as at November 2020 is provided in the attached table.



### Schedule 3 – Cultural Heritage Zoning Scheme

The MTW Aboriginal Cultural Heritage Zoning Scheme (CHZS) controls mine development-related land use activities within the AHMP Area, and other adjacent MTW lands. The CHZS is incorporated within the MTW Aboriginal Cultural Heritage GIS. The GIS records Aboriginal cultural heritage site locations, extents, recording and management information as well as the zoning scheme. The CHZS is revised from time to time in line with the implementation of the provisions of the AHMP.

The CHZS includes the following management status zones:

- Zone 1 Significant Area – designated areas to protect all known Aboriginal cultural heritage sites, places or objects such as isolated artefacts, artefact scatters, scarred trees, hearths, quarries, grinding grooves, burials, ceremonial sites, etc. Access is restricted to the sites and areas, and development is not permitted unless authorised under the provisions of the AHMP and appropriate management measures have been implemented (e.g. salvage collection completed under an AHIP consent). Zone 1 areas may also include Conservation Areas and Environmental Areas established for long term protection where development is not permitted.
- Zone 2 Restricted Access Area (Unassessed) – areas not assessed for cultural heritage, or where MTW determine that an assessment has been too limited or otherwise not adequate for management purposes, where access is restricted as a precautionary measure to protect any as yet unknown cultural heritage sites. Access is restricted and development is not permitted unless authorised under the provisions of the AHMP, or until an adequate assessment has been undertaken and appropriate management measures have been implemented.
- Zone 3 Restricted Access Area (Assessed) – areas where cultural heritage has been assessed and access is restricted to protect known cultural heritage sites, places and objects. Typically a Zone 3 area encompasses a number of sites over a larger area. Access is restricted and development is not permitted unless authorised under the provisions of the AHMP and appropriate management measures have been implemented (such as on a site avoidance basis).
- Zone 4 Conditional Development Area – areas where cultural heritage assessment and specific management measures have been completed under the provisions of the AHMP, or other appropriate statutory consent. Specific development disturbance activities can be approved as per terms and conditions of a GDP where such development does not adversely impact any cultural heritage sites or areas. Examples of this may include the continued use of existing access roads and tracks, grounds maintenance around historic heritage buildings, or areas where surface cultural heritage sites have been mitigated but where post-ground disturbance activity monitoring for the presence of sub-surface cultural materials is required under **Schedule 2** of this AHMP.

- Zone 5 Approved Development Area – where all cultural heritage assessment and management measures have been completed under the provisions of the AHMP and/or other appropriate statutory consent (e.g. sites in the area have been salvaged under a previous AHIP consent), and where all cultural heritage issues have been addressed. These areas typically include existing developed mine operations areas (working pits, dumps, haul roads, etc.), other approved development areas and infrastructure where there are no activity disturbance restrictions.

#### **Schedule 4 - Spiritual Places Verification and Management**

The cultural heritage assessment survey process has operated on a precautionary principle and all places identified as being spiritual places have been so recorded. A process will be implemented to verify the cultural status of all such sites. The purpose of the verification process is to determine whether or not places so recorded are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

- a. the CHWG may nominate up to three (3) representatives to assess each recorded spiritual place for its cultural status (or more than three where circumstances require and with the agreement of MTW );
- b. the CHWG, at their discretion, may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist or anthropologist to assist them with their cultural assessment, with MTW's agreement not unreasonably withheld;
- c. MTW may also nominate a Technical Advisor such as a suitably qualified and experienced archaeologist or anthropologist to provide advice to MTW on the cultural status of spiritual places;
- d. a pro-forma assessment sheet will be completed for each spiritual place and signed by the CHWG representatives and Technical Advisors (if in attendance);
- e. the pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of each spiritual place;
- f. the verification team will also provide management recommendations specific to each spiritual place based upon traditional customary knowledge; and
- g. MTW and the CHWG will, taking account of the proposed development plan for the location in question, determine the applicability of the proposed management measures, and settle the management strategy for each place.



## **Schedule 5 - Scarred Trees Verification and Management**

The cultural heritage assessment survey process has operated on a precautionary principle and all places identified as being potential scarred trees have been so recorded. A process will be implemented to verify the cultural status of all such sites. The purpose of the verification process is to determine whether the scars so recorded are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

- a. the CHWG may nominate up to three (3) representatives to assess each potential scarred tree for its cultural status (or more than three where circumstances require and with the agreement of MTW);
- b. the CHWG may nominate a Technical Advisor/s such as a suitably qualified and experienced archaeologist and/or arborist to assist them with their cultural assessment, with MTW's agreement not unreasonably withheld;
- c. MTW may also nominate a Technical Advisor/s such as a suitably qualified and experienced archaeologist and/or arborist to provide advice to MTW on the cultural status of scarred trees;
- d. a pro-forma assessment sheet will be completed for each tree and signed by the CHWG representatives and Technical Advisors (if in attendance);
- e. the pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of the trees, being either of Aboriginal cultural or not of Aboriginal cultural origin;
- f. in the event that a consensus is not reached on the cultural status of a scarred tree, an independent Technical Advisor acceptable to all parties will be engaged to make a determination on the status of a tree. This decision will be binding on all parties; and
- g. the verification team will also provide management recommendations specific to each tree based upon traditional customary knowledge, the MTW Scarred Tree Management Procedures, technical advice provided from time to time by Technical Advisors, qualified Arborists, Tree Surgeons or Conservators engaged for this purpose, Project Health and Safety requirements, and taking account of the proposed development plan for the location in question.

## **Schedule 6 - Scarred Trees Removal and Relocation**

A process will be implemented for the removal, relocation, storage and conservation of scarred trees where this is required to accommodate development activities authorised under the SSD-6464 project approval. The MTW Scarred Tree Relocation Procedures will provide guidance for the work procedures and to accommodate any specific management requirements as detailed in the Scarred Trees Verification pro-forma for each tree (see process in Schedule 5).

Relocated scarred trees will be stored in a manner consistent with the MTW Scarred Tree Relocation Procedures and through application of the management requirements outlined within this AHMP, as agreed by the CHWG.

## **Schedule 7 - Hearths Verification and Management**

The cultural heritage assessment survey process has operated on a precautionary principle and all places identified as being potential hearths have been so recorded. A process will be implemented to verify the cultural status of all such sites. The purpose of the verification process is to determine whether or not the features recorded as hearths are of traditional Aboriginal cultural origin so that appropriate management measures can be implemented. The verification process will include the following provisions:

- a. the CHWG may nominate up to three (3) representatives to assess each potential hearth for its cultural status (or more than three where circumstances require and with the agreement of MTW);
- b. the CHWG may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to assist them with their cultural assessment, with MTW's agreement not unreasonably withheld;
- c. MTW may also nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to provide advice to MTW on the cultural status of hearths;
- d. a pro-forma assessment sheet will be completed for each hearth and signed by the CHWG representatives and Technical Advisors (if in attendance);
- e. the pro-forma assessment sheet will note the outcome of the assessment and denote the cultural status of the hearth, being either of Aboriginal cultural or not of Aboriginal cultural origin;
- f. In the event that a consensus is not reached on the cultural status of the hearth, an independent Technical Advisor agreeable to all parties will be engaged to make a determination on the status of the potential hearth. This decision will be binding on all parties; and
- g. the verification team will also provide management recommendations specific to each hearth including whether or not the hearth should be excavated, and where viable, if carbon material samples can be collected for possible radiocarbon or other suitable dating analysis.

## Schedule 8 - Sub-Surface Investigation Areas

Sub-surface investigations will be limited to sites and areas specifically identified in **Schedule 2** of this AHMP as locations where such material is expected to be found (i.e. recorded Potential Archaeological Deposits) or where development activities lead to the identification of sub-surface cultural materials. Specific sub-surface investigation methodologies will be formulated for each site or area requiring this work as identified in **Schedule 2** of this AHMP but will be consistent with Requirement 16 of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

Sub-surface investigation methodologies may include any of the following measures:

- a. test pitting at defined locations;
- b. trench pitting at defined locations;
- c. grader or other mechanical scrapes at defined locations;
- d. ground penetrating radar (GPR) at defined locations;
- e. where test pits are required, initial test pitting will be limited to test pits of no more than 5m<sup>2</sup> per 100m<sup>2</sup> of the site or area identified for sub-surface investigations, unless otherwise specified for a particular site in **Schedule 2** of this AHMP;
- f. results of test pits, trenches, scrapes and GPR may necessitate further sub-surface investigations. In these circumstances, the additional work is to be consistent with the provisions of the AHMP and details will be specified in a ToR for the work; and/or
- g. the number, dimensions, depth, distribution, length and/or width of sub-surface excavations or scrapes for each nominated area will be consistent with the agreed mitigation methodology specified in the **Schedule 2** of this AHMP and as defined in a ToR.

### **Schedule 9 - Material Resource Areas (e.g. quarries for stone or ochre)**

As a general principle material resource areas will be subject to a controlled collection methodology unless otherwise specified in **Schedule 2** of this AHMP (e.g. if located within a Restricted Access area; if it is recommended that controlled collection is unnecessary). A controlled collection methodology may include any of the following measures but are to be specifically defined for each material resource area to suit the collection requirements of each site:

- a. where collection does not require a grid collection methodology, collection will be conducted in such a manner as the parties agree is appropriate to ensure all cultural materials are collected from the site;
- b. where the controlled collection methodology involves a grid collection methodology, the extent and boundary of the material resource area collection will be delineated by marker pegs and string lines;
- c. if the material resource area is to be sub-divided into grid cells for collection then an alpha numeric grid numbering system will be adopted;
- d. the material resource area extent collection boundary and grid cell dimensions will be those determined by agreement between MTW and the Technical Advisor engaged to assist with the controlled collection, taking account of data about the area contained in any report or **Schedule 2** of this AHMP; and
- e. materials will be collected in a manner that is consistent with the agreed mitigation methodology specified in **Schedule 2** of this AHMP and as defined in a ToR, with this to include a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
- f. materials will be managed in accordance with Requirement 26 'Stone Artefact Deposition and Storage' in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

## **Schedule 10 - Controlled Collection of Artefact Scatters**

As a general principle stone artefact scatters will be subject to a controlled collection methodology unless otherwise specified in **Schedule 2** of this AHMP. A controlled collection methodology may include any of the following measures but which are to be specifically defined for each artefact scatter to suit the collection requirements of each site. For example, the overall dimensions of the collection area and dimensions of the grid collection cells will vary from site to site:

- a. the extent and boundary of the artefact scatter to be the subject of controlled collection will be delineated by marker pegs and string lines;
- b. if the scatter area is to be sub-divided into grid cells for collection then an alpha numeric grid numbering system will be adopted;
- c. the scatter extent collection boundary and grid cell dimensions will be those determined by agreement between MTW and the Technical Advisor engaged to assist with the controlled collection, taking account of data about the area contained in any report or **Schedule 2** of this AHMP; and
- d. materials will be collected in a manner that is consistent with the agreed mitigation methodology specified in **Schedule 2** of this AHMP and as defined in a ToR. These are to include a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
- e. materials will be managed in accordance with Requirement 26 'Stone Artefact Deposition and Storage' in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

### **Schedule 11 - Salvage Collection of Isolated Artefacts**

As a general principle isolated stone artefacts will be subject to a salvage collection methodology unless otherwise specified in **Schedule 2** of this AHMP. A salvage collection methodology may include any of the following measures:

- a. each isolated artefact or designated site group of isolated artefacts will be collected in a manner that is consistent with the agreed mitigation methodology specified in **Schedule 2** of this AHMP and as defined in a ToR. The ToR is to include a procedure for the recording, bagging, tagging and storage of mitigated materials; and/or
- b. materials will be managed in accordance with Requirement 26 'Stone Artefact Deposition and Storage' in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.

## Schedule 12 - Activity Area Monitoring

As a general principle activity monitoring will be limited to sites, places or areas where:

- a. activity monitoring is specified for a particular site, place or area in **Schedule 2** of this AHMP; or
- b. sub-surface investigations indicate that activity area monitoring is required and agreed upon by all parties to the AHMP; or
- c. ground disturbance activities reveal Aboriginal cultural heritage sites, places or areas that warrant activity area monitoring.

Activity area monitoring will only be conducted after initial vegetation clearing has occurred and before top soil stripping, where these operations are not carried out simultaneously. Where vegetation clearing and top soil stripping do not occur simultaneously, and where it is safe to do so, activity area monitoring may occur after the vegetation clearing operations have been completed. These conditions are required to comply with mine site health and safety procedures.

Activity area monitoring will consist of the following:

- a. the CHWG may nominate up to three (3) representatives to conduct activity area monitoring for specified area/s (or more than three where circumstances require and with the agreement of MTW);
- b. MTW may nominate a Technical Advisor such as a suitably qualified and experienced archaeologist to participate in the activity area monitoring process;
- c. an activity area monitoring pro-forma assessment sheet will be completed for each area and signed by the CHWG representatives and Technical Advisors (if in attendance);
- d. The pro-forma assessment sheet will note the outcome of the activity area monitoring, and note any further management actions required to be undertaken or as concurrently implemented such as salvage collection; and
- e. materials will be managed in accordance with Requirement 26 'Stone Artefact Deposition and Storage' in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*.



### **Schedule 13 - Fencing and Barricading Cultural Heritage Sites, Places and Areas**

Temporary barricading (e.g. star picket and hi-viz poly-tag line/flag bunting or hi-viz mesh or similar) of cultural heritage sites, places and areas will occur where sites are not already hard fenced and:

- a. the cultural heritage site, place or area is designated as a Significant Area or Restricted Access Area; or
- b. the cultural heritage site, place or area is located within 50m of a development disturbance area (e.g. during construction); or
- c. the cultural heritage site, place or area is located within an area where barricading is required to protect sites from development disturbance activities or until such time as any necessary mitigation measures (e.g. salvage) have been implemented at the site); or
- d. the cultural heritage site, place or area may be adversely impacted upon by access, activity, or other human, livestock or natural process; or
- e. as otherwise determined as an appropriate precautionary measure at the discretion of MTW.

As a general principle, hard fencing (e.g. star picket/timber post and wire) of cultural heritage sites, places and areas will only occur where:

- a. the cultural heritage site, place or area is designated as a Significant Area or Restricted Access Area; or
- b. the cultural heritage site, place or area is located within 50m of an ongoing active work area; or
- c. the cultural heritage site, place or area may be adversely impacted upon by access, activity, or other human or natural process; and
- d. hard fencing of the site/s is specified in **Schedule 2** of this AHMP.

The following provisions shall apply in relation to cultural heritage sites, places or areas where hard fencing or barricading is required:

- except where otherwise specified in **Schedule 2** of this AHMP and/or Ground Disturbance Management Buffers (**Section 23**), a minimum 5m buffer around the defined site extent will apply for the purposes of defining the alignment of the fence/barricade (i.e. 10m diameter around an isolated artefact);
- the minimum 5m buffer is defined as the distance between the greatest extent of the site in any particular direction and the fence/barricade line;
- where specific site conditions or project requirements do not allow space sufficient for a minimum 5m buffer, for example where an existing track, fence, or other physical constraint intersects with the buffer alignment, then the buffer distance will be that which is the greatest practical distance available;
- Sites may be hard fenced or barricaded individually or collectively (i.e. several sites within a single hard fenced or barricaded area);
- Hard fencing is considered fencing of a permanent nature constructed using timber posts or steel pickets and three or more strands of wire, or other fencing materials;
- Barricading is considered fencing of a temporary nature constructed using steel pickets and hi-viz poly-tag line/flag bunting or hi-viz mesh or similar;

- In areas where continuous grazing of livestock occurs stock-proof hard fencing is to be installed, for sites where this is specified in the AHMP **Schedule 2**.
- Temporary and permanent barricading or fencing will be regularly inspected (and if necessary maintained and repaired) by cultural heritage staff at the following times:
  - i. Prior to approving any GDPs located in the vicinity of barricaded or fenced ACH sites;
  - ii. During AHMP Compliance Inspections; and
  - iii. During regular informal inspections by MTW staff in the course of their normal fieldwork duties.

## **Schedule 14 – Management of Human Skeletal Remains**

Where human skeletal remains are discovered within the AHMP Area the NSW Government sanctioned process for management of skeletal remains (as specified in Requirement 25 'Aboriginal Ancestral Remains' in the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW*) will be implemented. The following actions are to be implemented immediately in the event that identifiable or possible human skeletal remains are discovered.

### **Step 1.**

Any ground disturbance works occurring in the immediate vicinity of the human skeletal remains must cease immediately. The immediate area is to be secured to ensure no one interferes with the skeletal remains (it may be a crime scene).

### **Step 2.**

The person who made the discovery of identifiable or possible human skeletal remains is to immediately contact their supervisor and report the find. The supervisor will contact the General Manager (GM) - MTW (or most senior manager available on site) to report the find and advise that the find must be reported to the NSW Police (Singleton police station). The GM (or delegate) will determine who will report the find to the police.

### **Step 3.**

Once the discovery of identifiable or possible human skeletal remains has been reported to the police, the supervisor, or another person nominated by the GM, will implement any measures required by the police to secure the area. Unless otherwise advised by the police, the immediate area surrounding the human skeletal remains is then to be cordoned off at an appropriate distance with suitable barricading materials (such as hi-viz tagged polyline or mesh barricading).

### **Step 4.**

The police will determine if the identifiable or possible human skeletal remains are associated with a crime scene, or are possible Aboriginal or historical archaeological remains. If determined by police to be Aboriginal or historical archaeological remains, the police will contact Heritage NSW to provide written confirmation of the archaeological status of the find. If it is determined to be a police matter, personnel are to follow the instructions of the police.

### **Step 5.**

If Heritage NSW confirms that the remains are believed to be Aboriginal or historical archaeological in origin then the MTW Environment and Community Manager will advise the supervisor on any further management actions to be implemented and whether or not works can re-commence in the area, depending upon the written advice received from Heritage NSW. Any resulting cultural heritage management activities associated with the skeletal remains will be subject to consultation with, and endorsement by, the CHWG, in accordance with section 32.3 of this AHMP. At the same time as notification is made to Heritage NSW, the MTW Environment and Community Manager (or delegate) will notify and consult with Aboriginal community stakeholders as soon as it is practical and possible to do so (nominally within two business days) through the auspices of the CHWG.



### **Schedule 15 – Conservation Management Plan for the Wollombi Brook Aboriginal Cultural Heritage Conservation Area**

A copy of the Wollombi Brook Aboriginal Cultural Heritage Conservation Area Plan of Management is available on the MTW Insite page via the following link:

<https://insite.yancoal.com.au/document-library/management-plans-mtw>

## **Schedule 16 - Conservation Management Plan for the Loder Creek Aboriginal Cultural Heritage Conservation Area**

A copy of the Loder Creek Aboriginal Cultural Heritage Conservation Area Plan of Management is available on the MTW Insite page via the following link:

<https://insite.yancoal.com.au/document-library/management-plans-mtw>

## Schedule 17 – Hunter Valley Sand Bodies Research Program

### Background

In compliance with consent condition 43 for Warkworth Continuation Project SSD-6464 (see below), the then managers of MTW - Rio Tinto Coal Australia (RTCA) developed a research program for likely late Pleistocene and early Holocene sand deposits that may contain evidence of Aboriginal habitation in the Upper Hunter Valley. In doing so, the program has been prepared for RTCA by the following suitably qualified and experienced persons approved by the Secretary, Department of Planning and Environment: Dr David Cameron and Mr Joel Deacon (RTCA) and Dr Luke Godwin and Mr Scott L'Oste-Brown (Central Queensland Cultural Heritage Management - CQCHM). In preparing the research program, these people drew on advice from an Expert Panel (consisting of Professor Jim Allen, Professor Richard Fullagar, Professor Ian Lilley and Dr Phillip Hughes) that RTCA convened in 2012 to consider a range of issues associated with the nature and occurrence of late Pleistocene and early Holocene sites in the Upper Hunter Valley. In particular, the panel considered those issues outlined in a brief provided to Panel members. Attachment A provides further details of the credentials of the members of the Expert Panel, and Attachment B provides some details of the brief they were given.

In conducting its review of the conditions and preparing the research program, the following was considered:

- commentary and advice from the Expert Panel, who had reviewed written material listed in Attachment C and undertaken a field examination of various locations where late Pleistocene and early Holocene occupation has been investigated or is likely to be located prior to providing that advice;
- written materials documenting investigations at various sites where issues relating to possible late Pleistocene and early Holocene occupation of the Upper Hunter Valley were addressed. (These materials are also listed in Attachment C); and
- results of field examinations of various locations where late Pleistocene or early Holocene occupation has been investigated or may be located.

### Upper Hunter Valley Sand Bodies Study

#### ***(Warkworth Continuation Project SSD-6464 Consent Condition 43)***

*43. The Applicant shall prepare an Aboriginal Heritage Management Plan for the development to the satisfaction of the Secretary, and carry out the development in accordance with this plan. The plan must:*

*(a) be prepared in consultation with OEH and Aboriginal stakeholders, and submitted to the Secretary for approval prior to carrying out any development under this consent;*

*...*

*(c) include a research program, that has been prepared by suitably qualified and experienced persons whose appointment has been approved by the Secretary, for locating and evaluating sand bodies of likely Pleistocene and early Holocene age that may contain evidence of Aboriginal habitation in the Upper Hunter Valley.*

### Key Considerations

Taking account of the deliberations of the Expert Panel, this methodology has also been developed with a view to undertaking a program of a scale appropriate to address the research hypothesis. As such the excavation program has been designed with a view to

minimising the impact footprint on the identified landscape features and leaving material intact for any future improved investigation techniques or research priorities.

A certain degree of flexibility is required in the selection of sites and the specific design of the excavation strategy at each site. This will be required due to non-negotiable Occupational Health and Safety constraints or requirements pertaining to each location, such as safety in accessing sloping locations and similar issues. The first aspect of the fieldwork program, therefore, will include further assessment of each proposed location, undertaken with a view to examining the OH&S practicality of the proposed works. Locations will either be jettisoned or an alternate investigation methodology proposed to reflect advice. Where this occurs, regulatory agencies will be advised and agreement sought before implementation of the revised program.

The methodology proposed below has already been trialled at one possible late Pleistocene/early Holocene site: Sub Area A of the Warkworth Sandsheet (located on the eastern side of Wallaby Scrub Road) as part of the requirements under Consent Condition 61 of the Warkworth Extension Project DA\_09\_0202). The methodology was found both to be effective in implementation and in the results obtained. Accordingly, subject to commentary above, it seems appropriate to utilise this approach more generally unless specific conditions preclude this possibility.

### **Research Program**

After due consideration of earlier studies and reports, review of the deliberations of the Expert Panel, examination of various sites and landscape features, and taking account of the terms of the above-mentioned consent condition, the suitably qualified and experienced people have designed the Upper Hunter Valley Sand Bodies Study. This program has two elements:

1. The first element is to collate the current state of knowledge about the origin, age, distribution and post-depositional history of sand bodies and their known and potential archaeologies. This will include consideration of existing geological and vegetation mapping. The purposes of this will be to:
  - define and discuss the gross distribution of sand bodies within the Upper Hunter Valley;
  - identify which such areas are situated within RTCA lands and the status of that land (e.g. mining, conservation, currently unknown / undecided);
  - demonstrate that the sample that is situated within RTCA lands constitutes a reasonable sample of these bodies;
  - consider whether sand bodies that are situated outside of RTCA lands should be included within the study and the basis for this assessment;
  - summarise the known surface and subsurface archaeological investigations and their results within these bodies.
2. The second element is to include a field component (Figure 1). The basic principle for this will be that the scale of the work be a minimum sufficient to provide an understanding of the origin, age, distribution and post-depositional history of sand



bodies within the context of the status of the lands. There may be a staged approach to this work. On the basis of investigations and deliberations undertaken, a series of five investigation areas have been identified and are recommended for the conduct of excavation works as follows:

- two excavations within the Archerfield area where an extensive flat-topped sand body has accumulated above a large bend in the Hunter River. The excavations are to be located on the northern crest (Archerfield 1) and flank (Archerfield 2) of this sand plain adjacent and closest to the Hunter River. These excavation areas are to be approximately 700m apart;
- an excavation within the heavily truncated sand body located in the Cheshunt area (Cheshunt 1) located above the southern side of the Hunter River and some 3km to the south west of the Archerfield area. To minimise disturbance to what remains of this feature, this excavation was to be placed in association with a disused exploration drill hole (ID 4078c) sump. With the passage of time, this sump has been back-filled and rehabilitated resulting in an alternative location for this excavation (some 150m to the north east) being identified;
- an excavation within the recently inspected sand body located alongside the Hunter River some 1.9km downstream of its confluence with Wollombi Brook (Clifford 1). An extended but relatively narrow flat-topped sand ridge has formed along the southern side of the Hunter River in this area;
- two excavations within the Warkworth West/Springwood area where an extended area of very high sand dunes has built up south-east and outwards from Wollombi Brook. The Warkworth West 1 excavation area is located atop the highest visible crest of this dune body on the western side of Wallaby scrub road and adjacent to a recently rehabilitation gravel quarry. The Springwood 1 excavation area is located atop the toe of this dune body immediately alongside Wollombi brook. These excavation areas are some 770m apart;
- two excavations within the Warkworth Village area (Village 1 and 2). This area is located on the inside of a large bend of Wollombi Brook and some 1.6km to the north of the Warkworth West/Springwood area. The area has been considerably impacted by construction and development activities within the village but two prospective remnant high sand dune areas have been identified some 550m apart.

Additional investigation of other sand bodies as may be present and accessible (e.g. land ownership does not present an obstacle to access) along the Hunter River and Wollombi Brook may also be undertaken. These additional areas will be identified during the first element of the Study.

The primary aim of these excavations will test the following hypothesis: are the cultural and landscape depositional patterns identified from previous relevant excavations replicated elsewhere in the Upper Hunter Valley.

## **Methodology**

The following constitutes the methodology for the conduct of these excavations to test this hypothesis:

- Sites are to be sampled via the mechanical excavation of a series of trenches generally placed across the sands areas;
- the final location of the trenches will be finalised to cater for environmental and safety constraints with the intention being for the trenches to test a representative sample of the depths of the variously identified sand bodies;
- the trenches will be mechanically excavated using a minimum 900mm mud bucket;
- trenches will be excavated notionally in 5m pulls (constrained by excavator reach and mine site safety requirements);
- excavation units will be in the order of 100mm in depth;
- the sediments from each excavation unit will be sieved through a 10mm sieve mesh;
- all cultural material will be retained and dealt with in a manner consistent with provisions of the relevant Aboriginal Heritage Management Plan applying to the excavation area and /or other relevant Rio Tinto management instruments; and
- all trenches will be excavated through the sands to machine refusal in underlying deposits or as limited by the safe operating depth of the machine;

A geomorphic assessment will be conducted of all excavated sections in association with the Study project archaeologist. The timing of the geomorphological assessment will be dictated by the speed of completion of any excavation. The assessment, however, will be undertaken in stages. The aim of this assessment will be to provide an understanding of the origin, age and post-depositional history of the sand body. The geomorphic assessment is to be undertaken by a geomorphologist with expertise in Hunter Valley sand bodies and in collaboration with an OSL dating laboratory. The geomorphologist will decide the location and number of samples submitted for OSL dating. The maximum number of submitted samples for OSL assay will not exceed 20 per excavation without prior approval from RTCA.

To conform to mine site safety requirements, the initial excavated trenches will be widened prior to the conduct of the geomorphic assessment. This will be undertaken principally on one side and may, depending upon the trench's final depth and integrity, include the construction of a series of steps or battering. Additionally, the ends of each trench may be ramped outwards to allow for safe egress.

## **Provisions for Carrington Mine Colluvial Deposit 1 (CM-CD1)**

The Expert Panel recommended, and the suitably qualified and experienced people agreed, that the only outstanding matter with respect the work that has been undertaken at CM-CD1 was a dating program. The following was to be undertaken in this regard:

- to the extent possible, relocate the original excavation, exposing the section of the squares which were excavated into the Older Stratum; and

- the creation of new clean faces sufficient to facilitate the collection of adequate sediment samples in order to obtain up to six OSL dates.

This program will definitively answer two issues surrounding this site:

- whether these colluvial sediments are Pleistocene in age; and
- whether there are late Pleistocene and early Holocene sites in settings other than sand bodies in the Upper Hunter Valley.

### **Timing of the Research Program**

Date of Implementation: TBA

Fieldwork Program commencement: TBA

Expected Duration Fieldwork Program: 10 weeks duration (anticipated completion end of TBA)

Dates and Reporting: TBA

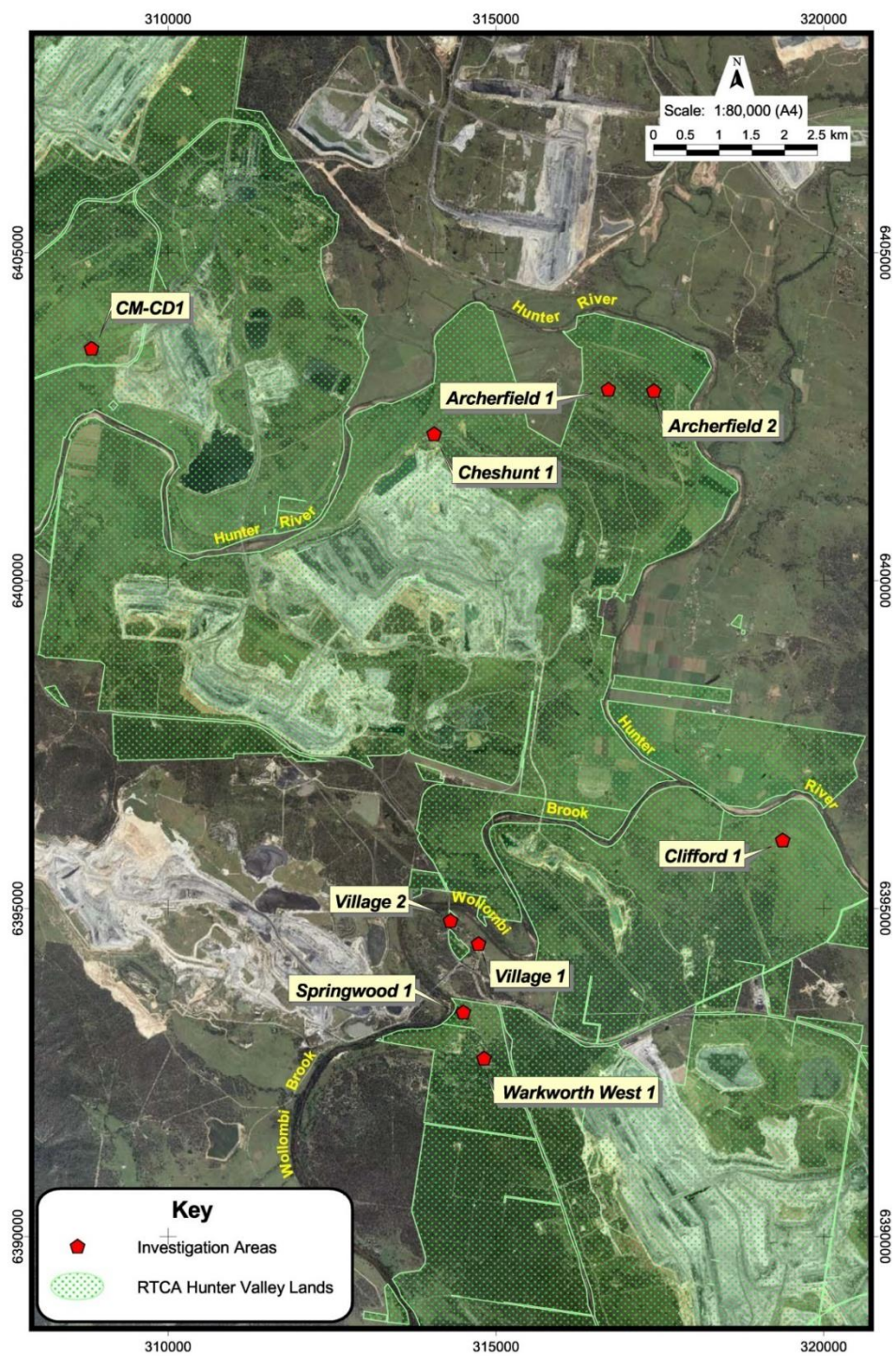


Figure 1: Investigation areas currently identified for inclusion in the Upper Hunter Valley Sand Bodies Study.

## **ATTACHMENT A**

### **Professor Jim Allen BA (Sydney), MA (Cambridge), PhD (ANU)**

From 1968 to 1998 Professor Allen held a series of academic positions in the University of Papua New Guinea (1968-1972), the Australian National University (1972-1985) and La Trobe University (1985-1998). Subsequently he has run his own consulting business (Jim Allen Archaeological Consultancies) while also continuing to research and publish in the academic field. Professor Allen has recently been elected a Foreign Associate of the US Academy of Sciences for original contributions to knowledge.

In 1985 Professor Allen became the Foundation Professor in Archaeology at La Trobe and subsequent to his retirement from there, has been made Professor Emeritus. He also holds the positions of Adjunct Professor of Anthropology in the University of Utah and Visiting Fellow, Centre for Archaeological Research, ANU, Canberra.

Since 1984 Professor Allen's particular interest has been the Pleistocene period of human occupation of Sahul. In 1984 he organised and led the Lapita Homeland Project which demonstrated the long-term Pleistocene occupation of the islands of the Bismarck Archipelago and was a first step in demonstrating the contemporaneous human occupation of Australia and PNG, an event currently set at c.47,000 years ago.

Between 1985 and 1992 Professor Allen initiated a number of La Trobe expeditions into the south-west rainforests of Tasmania to expand knowledge of the Pleistocene sites there, first recognised at Kutikina on the Franklin River. Eventually, sites approximately twice as old as Kutikina were found, fundamentally changing our knowledge of the first inhabitants of Tasmania (and Australia).

Amongst Professor Allen's consultancies, the extensive 2007 excavation for Theiss John Holland at Bend Road, a sand sheet site straddling the Mitcham to Frankston tollway, provided many insights of immediate relevance to potential Pleistocene sites in the Hunter Valley, particularly in respect to post-depositional disturbance vectors and determining the archaeological integrity of disturbed sites.

### **Professor Richard Fullagar BA (University of Melbourne), PhD (La Trobe University)**

Professor Fullagar is an archaeologist with 35 years of field and research experience. He has undertaken research projects in all states of Australia and in parts of Papua New Guinea and the Philippines. Professor Fullagar has received Australian Research Council support for fellowships and grants in West New Britain, Papua New Guinea; the Keep River Area in the East Kimberley; Cuddie Springs, Western NSW; and Riversleigh, Northwestern Queensland. He is a Chief Investigator on two current Australian Research Council projects, one to re-excavate very early archaeological

sites in Australia and Timor (with current excavations at Malakunaja in the Northern Territory); and the other to undertake collaborative research into wetlands with Aboriginal groups in New England and Tasmania.

Professor Fullagar's research on stone tool function has linked him with several other large research projects.

After completing a BA at the University of Melbourne Professor Fullagar was employed by the Victoria Archaeological Survey; and his PhD was completed at La Trobe University. Since then he has held research positions at the Australian Museum, University of Sydney and the University of Wollongong. His current research base is as Professorial Fellow in the Centre for Archaeological Science at the University of Wollongong. Current research interests include:

- use-wear and residue analysis;
- history of plant food processing;
- modern human evolution and dispersal into Australia; and
- Australian and Pacific archaeology.

Professor Fullagar was a founding Co-Director of Scarp Archaeology, a company that focuses on cultural heritage management projects in the Pilbara and the Hunter Valley in NSW. A recent project with RTCA entailed large scale excavations and detailed study of a potential Pleistocene site in the Warkworth Sands in the Hunter Valley.

### **Professor Ian Lilley BA, MA (University of Queensland), PhD (ANU)**

Ian is the Professor of Aboriginal and Torres Strait Islander Studies at the University of Queensland. He has worked in Australasian and Indo-Pacific archaeology and cultural heritage for 35 years and is currently undertaking fieldwork in Australia and the Pacific.

Professor Lilley was Specialist Adviser on Rio Tinto's recent publication project *Why cultural heritage matters*. He has run his own heritage consulting practice as well as the University of Queensland's heritage consulting unit, and was retained by Kinhill as Archaeologist – Queensland Region for five years.

He is Convenor of the International Heritage Group, a heritage capacity-building initiative of the universities of Oxford and Queensland, as well as Secretary-General of the Indo-Pacific Prehistory Association, the region's peak professional body. Professor Lilley is also Secretary-General of ICAHM, the international archaeological heritage management committee of ICOMOS, the statutory advisor to UNESCO on cultural heritage. He is also an ICOMOS World Heritage Assessor, and has also assisted with

the development of World Heritage nominations by the governments of the USA and Viet Nam. Professor Lilley has been Secretary of the World Archaeological Congress and President of the Australian Archaeological Association. He is currently a Fellow of the Society of Antiquaries of London and of the Australian Academy of Humanities.

Professor Lilley's interests include ancient migration and trade, the archaeology of social identity, archaeological ethics, and the role of archaeology and heritage in contemporary society. His most recent books are *Early Human Expansion and Innovation in the Pacific* (ICOMOS 2010) and *Archaeology of Oceania: Australia and the Pacific Islands* (Blackwell 2006).

#### **Dr Phillip Hughes BSc (Auckland), MSc (UNSW), PhD (ANU)**

Dr Hughes has had 45 years research and consulting experience in Australia, Papua New Guinea, the Pacific region, South and Southeast Asia and New Zealand. He has been an academic staff member in the University of New South Wales, the Australian National University (ANU) and at the University of Papua New Guinea (UPNG), and in 1990-91 was Pro-Vice Chancellor (Consulting) at UPNG. He is a Member of the Environmental Institute of Australia and New Zealand.

From 1991 to 1997 Dr Hughes was a Manager of Environmental Studies with Kinhill Engineers Pty Ltd. Since 1997 he has been a Director of Huonbrook Environment & Heritage Pty Ltd (HEH). He is currently a Visiting Fellow in the School of Archaeology and Anthropology at ANU where he co-supervises two PhD students working on HEH's ongoing Olympic Dam salvage archaeology project in South Australia.

Since 1981 Dr Hughes has worked variously as an archaeologist, geoarchaeologist and geomorphologist on more than thirty projects in the Hunter Valley. On most of these projects he was the principal investigator while on others he provided specialist geoarchaeological and geomorphological input. In 1984 he coordinated the National Parks and Wildlife Service's multidisciplinary Hunter Valley Region Archaeology Project and prepared Volume 1 (an overview of the regional archaeology and environment) of the resulting project reporting. In 2004 he prepared a chapter on the landscape history of the Upper Hunter Valley for the Aboriginal Heritage Baseline Study report produced by ERM Australia for the Upper Hunter Aboriginal Heritage Trust.

Dr Hughes has authored or co-authored more than ninety articles in refereed journals and monographs and has co-edited seven books. Since 1973 he has authored or co-authored more than 400 stand-alone reports and another 300 chapters or sections in EIAs and other planning documents on archaeological, geomorphological, environmental and social/poverty assessment consultancies carried out in a wide

range of environments in tropical, central and eastern Australia and in PNG, Kiribati, the wider South Pacific region, Indonesia, China and Vietnam.

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## **ATTACHMENT B**

### **DETAILS OF BRIEF PROVIDED TO EXPERT PANEL**

#### **BACKGROUND**

Rio Tinto Coal Australia (RTCA) holds a range of tenements in the Hunter Valley on which it undertakes coal mining and a range of ancillary activities associated with the extraction of coal. It is planned to expand its operations, notably at Mount Thorley-Warkworth (MTW) and Hunter Valley Operations (HVO) Carrington Mine (CM), as well as develop greenfields projects, notably at Mount Pleasant (MTP).

RTCA decided that the best means by which it could determine what actions it should take to in relation to consent conditions pertaining to possible late Pleistocene and early Holocene sites was to convene an expert panel to advise it on:

- a. what opportunities existed in the Hunter Valley in relation to late Pleistocene and early Holocene sites;
- b. what issues existed in relation to the identification of late Pleistocene and early Holocene sites in the Hunter Valley, and the likely condition and location of such sites;
- c. taking account of (a) and (b), advised RTCA as to the design and implementation of a research program for late Pleistocene and early Holocene sites.

#### **EXPERT PANEL DUTIES**

1. Reviewed a series of reports and papers previously prepared regarding Pleistocene sites in the Hunter Valley, with same to be provided by RTCA and review to take place in advance of (2);
2. Attended a two day workshop held in the Hunter Valley on 6-7 August 2012;
3. In the course of the workshop, examined various locations that were relevant to the matters under consideration;
4. During the workshop reviewed pertinent information and data and commented on any issues arising, and considered to what extent and how any particular issue might be addressed), proposed and discussed research strategies and methodologies to address those issues;

#### **OUTCOMES**

1. At the conclusion of the workshop the Panel settled, by consensus, a series of recommendations;

2. These recommendations included advice on the research design and methodologies that should be adopted, as well measures by which the outcomes of any research program should be reviewed and determined whether any further work was required to answer outstanding research questions (e.g. reconvening of the Expert Panel to review and advise);
3. Provided (1) and (2) to RTCA as a communique that could be tabled by RTCA with regulatory agencies.

### **TENTATIVE AGENDA**

- Day 1:           Travelled to Singleton (arrive afternoon)  
                    Panel dinner – informal discussions
- Day 2:           Preliminary discussions, anticipated objectives and outcomes  
                    Site visits (focusing on Warkworth Sands area, and CM-CD1, and other areas as time permits e.g. Cheshunt/Archerfield)  
                    Review issues observations from site visits, and preparation for day 2  
                    Panel dinner
- Day 3:           Review session  
                    Discussion of issues, approaches, research design and suggested methodologies  
                    Preparation of communique

### **OTHER ISSUES**

Panel members were made aware that officers of regulatory agencies could attend some, or all, of the workshop, including site visits.

RTCA proposed to record the Panel's discussions for internal purposes. No external use was to be made of any recorded material, or transcript of same, without the express prior written permission of Panel members.

Reports and papers for review were provided in an on-line drop box facility. RTCA sent details re same to each member of the Expert Panel.

If any Panel member had any further questions they were to immediately contact Dr David Cameron re same.

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## ATTACHMENT C

The following materials were made available to the Expert Panel to aid them in the formulation of the recommendations contained within this communiqué.

AECOM 2009 Aboriginal Heritage Assessment: Mount Thorley Warkworth Mine Lease West of Wallaby Scrub Road.

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## **Schedule 18 – Aboriginal Community and Regulator Consultation Documents**

CHWG October 2016 Consultation Draft